

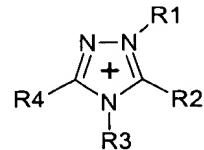
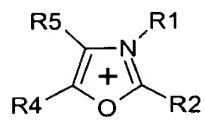
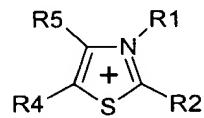
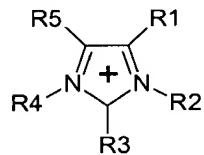
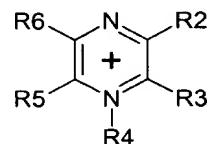
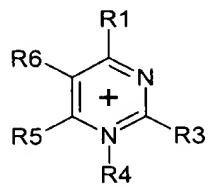
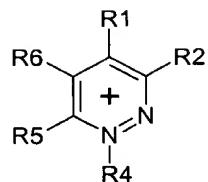
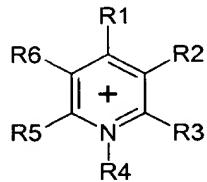
LISTING OF CLAIMS

1. (Previously Amended) An ionic liquid of the general formula



wherein:

$K^+$  is a cation selected from:



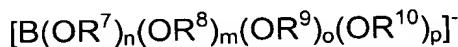
wherein

$R^1$  to  $R^6$  are identical or different and are each individually

- H,
- a halogen,

- an alkyl radical ( $C_1$  to  $C_8$ ), which is unsubstituted, or which is partially or fully substituted by F, Cl, N( $C_nF_{(2n+1-x)}H_x$ )<sub>2</sub>, O( $C_nF_{(2n+1-x)}H_x$ ), SO<sub>2</sub>( $C_nF_{(2n+1-x)}H_x$ ) or  $C_nF_{(2n+1-x)}H_x$  wherein  $1 < n < 6$  and  $0 < x \leq 13$
- a phenyl radical which is unsubstituted or which is partially or fully substituted by F, Cl, N( $C_nF_{(2n+1-x)}H_x$ )<sub>2</sub>, O( $C_nF_{(2n+1-x)}H_x$ ), SO<sub>2</sub>( $C_nF_{(2n+1-x)}H_x$ ) or  $C_nF_{(2n+1-x)}H_x$  wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or
- one or more pairs of adjacent R<sup>1</sup> to R<sup>6</sup> can also be an alkylene or alkenylene radical and having up to 8 C atoms, wherein the radical is unsubstituted or partially or fully substituted by halogen, N( $C_nF_{(2n+1-x)}H_x$ )<sub>2</sub>, O( $C_nF_{(2n+1-x)}H_x$ ), SO<sub>2</sub>( $C_nF_{(2n+1-x)}H_x$ ) or  $C_nF_{(2n+1-x)}H_x$  wherein  $1 < n < 6$  and  $0 < x \leq 13$

wherein A<sup>-</sup> is an anion selected from



wherein

$0 \leq n, m, o, p \leq 4$ , and  $m+n+o+p=4$ , and

R<sup>7</sup> to R<sup>10</sup> are different or identical and are each, individually:

an aromatic ring selected from a phenyl, anthracenyl and phenanthrenyl ring, which is unsubstituted, or which is monosubstituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or halogen,

an aromatic heterocyclic ring selected from a pyridyl, pyrazyl and pyrimidyl ring, which is unsubstituted, or which is mono-substituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or halogen,

or

an alkyl radical ( $C_1$  to  $C_8$ ), which is unsubstituted, or which is partially or fully substituted by F, Cl,  $N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$ , or  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ ,

and wherein one or more pairs of  $R^7$  to  $R^{10}$  can also form

an aromatic ring selected from a anthracenylene and phenanthrenylene ring, which is unsubstituted or an aromatic ring selected from a phenylene, naphthylene, anthracenylene and phenanthrenylene ring which is monosubstituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or halogen,

an aromatic heterocyclic ring selected from a pyridylene, pyrazylene and pyrimidylene ring, which is unsubstituted, or which is mono-substituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or halogen,

or

an alkylene or alkenylene radical having up to 8 C atoms and which is unsubstituted or which is partially or fully substituted by halogen,  $N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$  or  $C_nF_{(2n+1-x)}H_x$  wherein  $1 < n < 6$  and  $0 < x \leq 13$

or  $OR^7$  to  $OR^{10}$ , individually or together,

are an aromatic having 6 to 14 C atoms and which is a dicarboxyl, oxysulfonyl or oxycarbonyl radical, which is unsubstituted, or which is partially or fully substituted by F, Cl,  $N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$  or  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$

or

are aliphatic having 1 to 6 C atoms and which is a carboxyl, dicarboxyl, oxysulfonyl or oxycarbonyl radical, which is

unsubstituted, or which is partially or fully substituted by F, Cl, N(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>)<sub>2</sub>, O(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>), SO<sub>2</sub>(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>) or C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>, wherein 1< n < 6 and 0 < x ≤ 13.

2. (**original claim**) An ionic liquid according to claim 1, wherein at least one of R<sup>1</sup> to R<sup>6</sup> of the cation is an alkyl radical which is unsubstituted or partially or fully substituted by F, Cl, N(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>)<sub>2</sub>, O(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>), SO<sub>2</sub>(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>) or C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub> wherein 1< n < 6 and 0 < x ≤ 13.

3. (**original claim**) An ionic liquid according to claim 1, wherein at least one of R<sup>1</sup> to R<sup>6</sup> of the cation is a phenyl radical which is unsubstituted or partially or fully substituted by F, Cl, N(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>)<sub>2</sub>, O(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>), SO<sub>2</sub>(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>) or C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub> wherein 1< n < 6 and 0 < x ≤ 13.

4. (**original claim**) An ionic liquid according to claim 1, wherein at least a pair of R<sup>1</sup> to R<sup>6</sup> of the cation is an alkylene or alkenylene radical which is unsubstituted or partially or fully substituted by halogen, N(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>)<sub>2</sub>, O(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>), SO<sub>2</sub>(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>) or C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub> wherein 1< n < 6 and 0 < x ≤ 13.

5. (**original claim**) An ionic liquid according to claim 1, wherein at least one of R<sup>7</sup> to R<sup>10</sup> of the anion is an alkyl radical which is unsubstituted or partially or fully substituted by F, Cl, N(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>)<sub>2</sub>, O(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>), SO<sub>2</sub>(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>), or C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>, wherein 1< n < 6 and 0 < x ≤ 13.

6. (**original claim**) An ionic liquid according to claim 1, wherein at least one pair of R<sup>7</sup> to R<sup>10</sup> of the anion is an alkylene or alkenylene radical which is unsubstituted or partially or fully substituted by a halogen,

$N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$  or  $C_nF_{(2n+1-x)}H_x$  wherein  $1 < n < 6$  and  $0 < x \leq 13$ .

**7. (Previously Amended)** An ionic liquid according to claim 1, wherein at least one of  $R^7$  to  $R^{10}$  of the anion is an aromatic ring selected from a phenyl, anthracenyl and phenanthrenyl ring, which is unsubstituted, or which is monosubstituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or by a halogen.

**8. (Previously Amended)** An ionic liquid according to claim 1, wherein at least one of  $R^7$  to  $R^{10}$  of the anion is an aromatic heterocyclic ring selected from a pyridyl, pyrazyl and pyrimidyl ring, which is unsubstituted, or which is monosubstituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or {F, Cl or Br}.

**9. (Previously Amended)** An ionic liquid according to claim 1, wherein at least one pair of  $R^7$  to  $R^{10}$  of the anion is an aromatic ring selected from an anthracenylene and phenanthrenylene ring, which is unsubstituted or a phenylene, naphthylene, anthracenylene and phenanthrenylene ring, which is monosubstituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or halogen.

**10. (original claim)** An ionic liquid according to claim 1, wherein at least one pair of  $R^7$  to  $R^{10}$  of the anion is an aromatic heterocyclic ring selected from a pyridylene, pyrazylene and pyrimidylene ring, which is unsubstituted, or which is mono-substituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or by halogen.

11. (withdrawn) An electrochemical cell comprising a cathode, an anode, a separator, and the ionic liquid of claim 1.
12. (withdrawn) A supercapacitor comprised of at least a pair of electrodes, a separator, and the ionic liquid of claim 1.
13. (withdrawn) An electrolyte composition comprising an ionic liquid of claim 1 and an aprotic solvent.
14. (withdrawn) An electrolyte composition comprising an ionic liquid of claim 1 and a conductive salt.
15. (original claim) A method for making an ionic liquid according to claim 1, comprising reacting a chloride salt of the formula  $K^+Cl^-$  with a lithium salt of the formula  $Li^+A^-$  within an aprotic solvent.
16. (Currently Amended) A compound An ionic liquid according to claim 1 selected from :
- 1-ethyl-3-methylimidazolium bis [1,2-benzenediolato-O,O'] borate,  
1-ethyl-3-methylimidazolium bis[oxalato]borate, and  
1-ethyl-3-methylimidazolium bis[salicylato]borate.
17. (Previously Amended) A compound according to claim 16, wherein said compound is:

1-ethyl-3-methylimidazolium bis [1,2-benzenediolato-O,O'] borate.

18. (previously presented) A compound according to claim 1, wherein A<sup>-</sup> is

bis[oxalato]borate,

or

bis[salicylato]borate.

19. (new) A compound according to claim 1, wherein A<sup>-</sup> is

bis[salicylato]borate.

20. (new) A compound according to claim 16, wherein said compound is:

1-ethyl-3-methylimidazolium bis[oxalato]borate.

21. (new) A compound according to claim 1, wherein OR<sup>7</sup> to OR<sup>10</sup>, individually or together,

are aliphatic having 1 to 6 C atoms and which is a carboxyl, dicarboxyl, oxysulfonyl or oxycarbonyl radical, which is unsubstituted, or which is partially or fully substituted by F, Cl, N(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>)<sub>2</sub>, O(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>), SO<sub>2</sub>(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>) or C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>, wherein 1<n<6 and 0<x≤13.